



NFPA

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Phone: +1 (617) 770-3000 Fax: +1 (617) 770-0700 www.nfpa.org

January 7, 2003

Ms. Sharon E. Bisco, Chief
Management and Organization Division
National Institute of Standards and Technology
100 Bureau Drive, MS 3220
Gaithersburg MD 20899

Dear Ms. Bisco:

On the enclosed grant proposal for a study of the World Trade Center evacuation, I have bracketed for withholding the labor and budget sections of the cost proposal.

Let me know if you need anything else.

Sincerely,

Rita F. Fahy, PhD
Fire Analysis and Research Division

*Rec'd in
MRO
1/8/03*



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

December 4, 2002

Dr. Rita F. Fahy, Manager
Fire Data Bases and Systems
Fire Analysis and Research Division
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

Dear Dr. Fahy:

The National Institute of Standards and Technology (NIST), an agency of the Federal Government, recently received a request made under the Federal Freedom of Information Act (Title 5 U.S.C. § 552) for certain documents contained in our files. A copy of the request is enclosed.

After conducting a thorough search of NIST's files, we have located records, which we have determined to be, in whole or in part, responsive to the FOIA request. Among these are records that originated with and/or pertain to the collapse of World Trade Center Seven. We are sending copies of these records to you so that you may review and comment on them as to whether or not they should be released to the requester.

Under the FOIA, the Government is required to release to a requester copies of documents it has in its files that are not otherwise protectable by an exception to the FOIA. One particular exception, exemption (b)(4), allows the Government to withhold from disclosure any records, or portions thereof, which contain "trade secrets and commercial or financial information obtained from a person and privileged or confidential."

Please review the attached documents and indicate if any of the documents, or portions thereof, should be withheld from disclosure under (b)(4) as being privileged, as defined above. Please indicate the protectable portions, if any, by placing brackets around them and send the documents back to me, using the enclosed envelope. My office will then review the documents and remove or "blacken out" the appropriate portions of the documents before release to the requester.

Time is of the essence in the processing of this request. Please provide your comments to me no later than C.O.B. Friday, December 20, 2002. Thank you very much for your assistance in this matter. If you have any questions, please contact me at (301) 975-4054.

Sincerely,

Sharon E. Bisco, Chief
Management and Organization Division

Enclosure

NIST

ZELLE, HOFMANN, VOELBEL, MASON & GETTE

REGISTERED LIMITED LIABILITY PARTNERSHIP

BOSTON
DALLAS
LOS ANGELES
MINNEAPOLIS
SAN FRANCISCO
BEIJING*
SHANGHAI*

1201 MAIN STREET
SUITE 3000
DALLAS, TX 75202
214-742-3000 TELEPHONE
214-760-8994 FACSIMILE
www.zelle.com

Lisa Johnson
214-749-4208
ljohnson@zelle.com

*In association with ZY & PARTNERS

April 17, 2002

Sharon Bisco, FOIA & Privacy Act Officer
National Institute of Standards and Technology
100 Bureau Drive, STOP 3220
Gaithersburg, MD 20899-3220

Re: Freedom of Information Act Request

Dear Ms. Bisco:

We understand the National Institute of Standards and Technology ("NIST") is conducting an investigation into the technical, casual factors that led to the collapse of Seven World Trade Center on September 11, 2001. Under the Freedom of Information Act, 5 U.S.C. Sec.552, we request copies of all documents from September 11, 2001 to the present related to the NIST's investigation of:

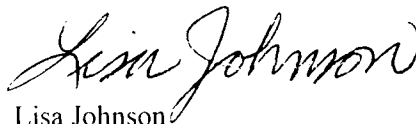
Seven World Trade Center
New York, New York 10048.

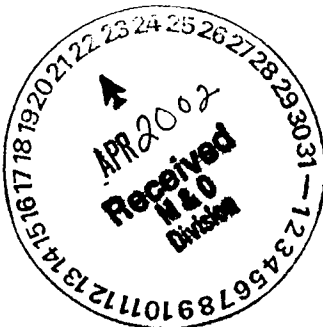
We would also appreciate copies of all documents relied upon by the NIST in performing its investigation. We are willing to pay for the reasonable and necessary costs involved in producing this information. Please contact me if authorization for costs is required.

Thank you for your consideration of this request.

Very truly yours,

ZELLE, HOFMANN, VOELBEL, MASON & GETTE, L.L.P.


Lisa Johnson
Paralegal



File
Grants

Grant Proposal - Revised

**World Trade Center Evacuation
New York, New York
September 11, 2001**

Human Behavior Study

Submitted by

National Fire Protection Association
1 Batterymarch Park
PO Box 9101
Quincy, Massachusetts 02269-9101

January 02, 2002

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APPLICATION FOR
FEDERAL ASSISTANCE

TYPE OF SUBMISSION:

Preapplication
 Application ☐ Construction
 Construction ☐ Non Construction
 Non Construction ☐

2. DATE SUBMITTED

01/02/02

Federal Identifier

3. DATE RECEIVED BY STATE

State Application Identifier

4. DATE RECEIVED BY FEDERAL AGENCY

Applicant Identifier

APPLICANT INFORMATION

Name: National Fire Protection Association

Organizational Unit: Fire Analysis & Research Division

Address (give city, county, state and zip code):

Batterymarch Park

Norfolk County

Boston, MA 02269

Name and telephone number of the person to be contacted on matters involving this application (give area code):

Rita Fahy

(617) 984-7469

EMPLOYER IDENTIFICATION NUMBER (EIN):

04--1653090

7. TYPE OF APPLICANT: (enter appropriate letter in box)

N

- A. State
 B. County
 C. Municipal
 D. Township
 E. Interstate
 F. Intermunicipal
 G. Special District
 H. Independent School Dist.
 I. State Controlled Institution of Higher Learning
 J. Private University
 K. Indian Tribe
 L. Individual
 M. Profit Organization
 N. Other (specify)

International Non-Profit Association

TYPE OF APPLICATION:

☒ New☐ Continuation☐ Revision

Revision, enter appropriate letter(s) in box(es):

☐ ☐

- A. Increase Award
 D. Decrease Duration
 B. Decrease Award
 Other (specify):
 C. Increase duration

9. NAME OF FEDERAL AGENCY:

National Inst of Stds and Technology

CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:

☐ ☐ - ☐ ☐ ☐ ☐

TITLE: WTC Evacuation-Human Behavior Study.

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

World Trade Center Evacuation

Human Behavior Study

AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):

United States

PROPOSED PROJECT:

14. CONGRESSIONAL DISTRICTS OF:

Start Date:

Ending Date:

12/31/02

a. Applicant

10th District Massachusetts

b. Project

8th District New York

ESTIMATED FUNDING:

Federal

\$

202,561

Applicant

\$

State

\$

Local

\$

Other

\$

Program Income

\$

TOTAL

\$

202,561

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES, THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:

DATE _____

b. NO. ☒ PROGRAM IS NOT COVERED BY E.O. 12372
☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

☐ Yes

If "Yes," attach an explanation.

☒ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

1. Typed Name of Authorized Representative:

George D. Miller

b. Title:

President and Chief Executive Officer

c. Telephone Number:

(617) 984-7200

2. Signature of Authorized Representative:

e. Date Signed:

January 02, 2002

Previous Edition Usable
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Standard Form 424 (REV 4)
 Prescribed by OMB Circular A

APPLICATION FOR
FEDERAL ASSISTANCE

TYPE OF SUBMISSION:

Application

Construction

Also Construction

Preapplication

☐ Construction☐ Non Construction

2. DATE SUBMITTED

01/02/02

Federal Identifier

3. DATE RECEIVED BY STATE

State Application Identifier

4. DATE RECEIVED BY FEDERAL AGENCY

Applicant Identifier

APPLICANT INFORMATION

Name: National Fire Protection Association

Organizational Unit: Fire Analysis & Research Division

Address (give city, county, state and zip code):

Batterymarch Park

Norfolk County

Norfolk, MA 02269

Name and telephone number of the person to be contacted on matters involving this application (give area code):

Rita Fahy

(617) 984-7469

EMPLOYER IDENTIFICATION NUMBER (EIN):

04--1653090

7. TYPE OF APPLICANT: (enter appropriate letter in box)

N

- A. State
B. County
C. Municipal
D. Township
E. Interstate
F. Intermunicipal
G. Special District
H. Independent School Dist
I. State Controlled Institution of Higher Learning
J. Private University
K. Indian Tribe
L. Individual
M. Profit Organization
N. Other (specify)

International Non-Profit Association

TYPE OF APPLICATION

☒ New☐ Continuation☐ Revision

Revision, enter appropriate letter(s) in box(es):

☐ ☐

- A. Increase Award
D. Decrease Duration
R. Decrease Award
Other (specify):

9. NAME OF FEDERAL AGENCY:

National Inst of Stds and Technology

CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:

☐ ☐ - ☐ ☐ ☐

TITLE: WTC Evacuation-Human Behavior Study

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

World Trade Center Evacuation

Human Behavior Study

AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):

United States

PROPOSED PROJECT:

14. CONGRESSIONAL DISTRICTS OF:

Start Date:

Ending Date:

12/31/02

a. Applicant

10th District Massachusetts

b. Project

8th District New York

ESTIMATED FUNDING:

Federal	\$	202,561
Applicant	\$	
State	\$	
Local	\$	
Other	\$	
Program Income	\$	
TOTAL	\$	202,561

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES, THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:

DATE _____

b. NO. ☒ PROGRAM IS NOT COVERED BY E.O. 12372
☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

☐ Yes

If "Yes," attach an explanation.

☒ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES THE ASSISTANCE IS AWARDED.

1. Typed Name of Authorized Representative:

George D. Miller

b. Title:

President and Chief Executive Officer

c. Telephone Number:

(617) 984-7200

2. Signature of Authorized Representative:

e. Date Signed:

January 02, 2002

Previous Edition Usable

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Standard Form 424 (REV 4)
Prescribed by OMB Circular A

Standard Form 424A

OMB Approval No. 0348-0044

BUDGET INFORMATION - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.		\$	\$	\$ 202,561	\$	\$ 202,561
2.						
3.						
4.						
5. TOTALS		\$	\$	\$ 202,561	\$	\$ 202,561

SECTION B - BUDGET CATEGORIES

6 Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	\$ 42,516	\$	\$	\$	\$ 42,516
b. Eringe Benefits Overhead 71.19%	30,268				30,268
c. Travel	8,932				8,932
d. Equipment					
e. Supplies	200				200
f. Contractual	96,850				96,850
g. Construction					
h. Other	2,464				2,464
i. Total Direct Charges (sum of 6a-6h)	181,230				181,230
j. Indirect Charges	21,331				21,331
k. TOTALS (sum of 6i-6j)	\$ 202,561	\$	\$	\$	\$ 202,561
7. Program Income	\$ 0	\$	\$	\$	\$ 0

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Standard Form 424A (4-92)
Prescribed by OMB Circular A-102

Standard Form 424A (cont'd)

SECTION C - NON-FEDERAL RESOURCES

	(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) Totals
8		\$	\$	\$	\$
9					
10					
11					
12	TOTALS (sum of lines 8 and 11)	\$	\$	\$	\$

SECTION D - FORECASTED CASH NEEDS

	(a) Grant Program	Total for 1st Year	1st Quarter	2nd quarter	3rd Quarter	4th Quarter
13	Federal	\$ 202,561	\$ 50,640	\$ 50,640	\$ 50,640	\$ 50,641
14						
15	TOTALS (sum of lines 13 and 14)	\$ 202,561	\$ 50,640	\$ 50,640	\$ 50,640	\$ 50,641

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

	(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)			
		(b) First	(c) Second	(d) Third	(e) Fourth
16	World Trade Center Evacuation	\$ 202,561	\$	\$	\$
17	Human Behavior Study				
18					
19					
20	TOTALS (sum of lines 16 and 19)	\$ 202,561	\$	\$	\$

SECTION F - OTHER BUDGET INFORMATION

(Attach additional Sheets if Necessary)

21	Direct Charges: 181,230	22	Indirect Charges: G&A 25.28% 21,331 OH 71.19% 30,268
23	Remarks: G&A will not be charged on contractual expenses		

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

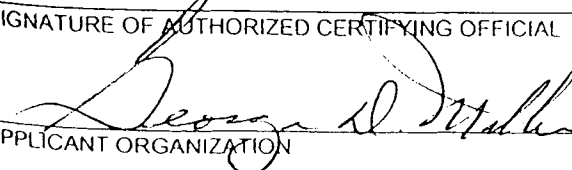
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7326) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		TITLE President and Chief Executive Officer
APPLICANT ORGANIZATION National Fire Protection Association		DATE SUBMITTED 1/02/02

CERTIFICATIONS REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS; DRUG-FREE WORKPLACE REQUIREMENTS AND LOBBYING

Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 26, "Governmentwide Debarment and Suspension (Nonprocurement)" and "Governmentwide Requirements for Drug-Free Workplace" and 15 CFR Part 28, "New Restrictions on Lobbying." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

1. DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

As required by Executive Order 12549, Debarment and Suspension, and implemented at 15 CFR Part 26, for prospective participants in primary covered transactions, as defined at 15 CFR Part 26, Sections 26.105 and 26.110 -

(1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. DRUG-FREE WORKPLACE REQUIREMENTS Alternate I. Grantees Other Than Individuals

As required by the Drug-Free Workplace Act of 1988, and implemented at 15 CFR Part 26, Subpart F, for grantees, as defined at 15 CFR Part 26, Sections 26.605 and 26.610 -

A. The grantee certifies that it will or will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's

workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an ongoing drug-free awareness program to inform employees about -

(1) The dangers of drug abuse in the workplace;

(2) The grantee's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will--

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to the Director, Office of Federal Assistance, Office of Federal Assistance and Management Support, HCHB Room 6054, U.S. Department of Commerce, Washington, DC 20230. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted--

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

B. The grantee shall insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance: (Street address, city, county, state, ZIP code):

1 Batterymarch Park

Quincy, Norfolk County

Massachusetts 02269-9101

Check ☒ if there are workplaces on file that are not identified here.

Alternate II. Grantees Who Are Individuals

As required by the Drug-Free Workplace Act of 1988, and implemented at 15 CFR 26, Subpart F, for grantees, as defined at 15 CFR Part 26, Sections 26.605 and 26.610 -

(A) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;

(B) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the Director, Office of Federal Assistance, Office of Federal Assistance and Management Support, HCHB Room 6054, U.S. Department of Commerce, Washington, DC 20230. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

3. LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000, or loan or loan guarantee over \$150,000, as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee

of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification(s).

NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

National Fire Protection Association

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

George D. Miller, President and Chief Executive Officer

SIGNATURE

DATE

01/02/02

Introduction

On September 11, 2001, at 8:48 and 9:03 a.m., two commercial aircraft struck the two towers of the World Trade Center in New York City. The evacuation of the towers began almost immediately and ended when the towers collapsed within 30 minutes of each other, less than two hours after the first crash. Approximately 3,000 people were killed in the crashes, fires and collapses, including 157 on the two aircraft, and over 350 firefighters, police officers and rescue workers. Thousands more were injured. It is estimated that approximately 15,000 building occupants were able to evacuate the two towers and escape the collapses. After the collapse of the towers, an uncontrolled fire burned in the World Trade Center's Building 7, leading to its eventual collapse, hours after the building's occupants had evacuated.

As a result of the events of September 11, we are faced with several challenges concerning the provision of fire safety to the occupants of high-rise office buildings as well as the public's perception of safety in high-rise buildings. The issues of structural stability and performance of buildings after a terrorist attack will be addressed by others. In the field of human behavior in fire, we are concerned with the protection and/or safe evacuation of the occupants in high-rise structures. After the attacks on the World Trade Center, we have an opportunity to document what was, to a great extent, an extremely successful evacuation of the two towers. Documentation of the evacuation of Building 7 will collect detailed information on the total evacuation of a 47-story office building under emergency, though not fire, conditions.

In 1993, a bomb exploded in a subterranean garage below the World Trade Center plaza in New York City. That explosion and subsequent fire caused extensive structural damage in several basement levels, which interfered with the operation of the fire protection and other emergency systems and resulted in the evacuation of thousands of occupants of the complex. Researchers from NFPA and the National Research Council of Canada (NRCC) studied that evacuation, documenting behaviors of the occupants and the difficulties they experienced as they made their way out of the buildings. Changes were made to the emergency procedures and the evacuation system in the twin towers after that incident, and these changes have been credited by many for the largely successful evacuation in September 2001.

Proposed Studies

The NFPA proposes a research project to study the human behavior of building occupants in this recent incident and to document, to the extent possible, those engineering details such as building design, fire safety features, and smoke spread, that affected behavior. This proposed NFPA research effort will analyze the dynamics of human behavior in this incident to corroborate key engineering-oriented findings and document human actions during the event.

This project will collect and preserve human behavior data, and document findings in reports to aid in the understanding of what people do in fires and why and how those actions may conform to or differ from the assumptions used in designing and planning for life safety in such large buildings. An overall purpose of the project is to document how changes made after the 1993 bombing may have improved the efficiency of the 2001 evacuation, in order to contribute to the improvement of fire safety in similar occupancies. A full report, as well as several papers in trade magazines and scientific journals of the fire and building communities, will be published to be used by the fire safety and emergency evacuation communities at large. The project will consist of three major components, two dealing with the World Trade Center twin towers and the third dealing with another major high-rise building on the site.

Relevant Experience

In 1993, NFPA investigated the bombing of the World Trade Center towers and, with NRCC, conducted a survey-based study of human behavior in the resulting evacuation. The NFPA maintains a fire investigations program supported by a cadre of fire protection engineers and specialists who conduct field studies throughout the U.S. and Canada and produce reports for use by the fire safety community. Since the September 2001 incident, NFPA staff has been on the scene as part of FEMA's Building Performance Assessment Team (BPAT) to document structural performance and fire protection systems in the towers.

NRCC has a great deal of experience in the study of evacuations of both high- and mid-rise buildings in drills and after actual fires. Studies have been conducted on the occupant behavior and evacuation of different underground systems in England and Canada, as well as studies in residential, office, mercantile or assembly buildings. NFPA has conducted several human behavior studies in the past, including the joint NFPA/NRCC study of the 1993 World Trade Center evacuation, and proposes that this human behavior study be conducted by the same team. Also involved will be NFPA's on-scene investigator of the World Trade Center incident and experts in the NFPA Life Safety Code®.

Study Design and Objectives

The purpose of this study is to document the actions of the occupants of the World Trade Center complex in order to see what effect their experiences from 1993 and the subsequent new procedures and training had on their decisions, to gain an understanding of what decisions they made and why, to assess the effectiveness of their decisions and actions and reasons for successes and problems, and to learn of any information or experience gained by the evacuees that they feel might be of value to others in similar situations.

The information elicited in this study will complement the technical investigation on the incident being conducted by the NFPA as part of FEMA's BPAT team and will contribute to the body of knowledge being used throughout the world for the design of evacuation systems for high-rise buildings.

Objectives of the human behavior study are:

- To document the successes of the evacuation of the September 11 events and identify key elements that have contributed to those successes.
- To gain an understanding of the dynamic interaction of human behavior, the physical environment and the products of combustion through time.
- To identify and quantify escape modes and routes utilized by occupants and their stated reasons for the reported actions.
- To document fire, smoke and other hazardous conditions as observed by occupants and their perception of the threat.
- To document how their presence in the towers during the 1993 bombing, or their knowledge of the 1993 bombing, may have affected their response to the September 11 attack.
- To assess if the implemented recommendations following the 1993 bombing had an impact on the occupant responses during this event.
- To develop findings of significance to fire safety procedures in similar occupancies and for related fire safety educational efforts.

Study 1 -- The Evacuation of Towers 1 and 2

Data Collection

Since it would be prohibitively expensive in terms of both time and staff to attempt to survey the thousands of people who evacuated the towers that day, a subset of the population will be contacted. In the 1993 study, the survey population consisted of the 1,600 members of the fire safety team (floor fire wardens) in the two towers. In this study, the plan is to approach tenant companies at three strata in the towers and survey all surviving employees in those companies who were present in the building at the time of the incident. The selection of tenant companies will be designed to achieve reasonable representativeness of the two buildings' populations, within the context of a project of manageable size.

The choice of candidate companies will take into consideration the losses they may have suffered in the crashes, fires and explosions. Many of the details of evacuation behavior that would be interesting or useful to have are difficult or impossible to elicit from the memories of people who have acted under extreme stress. Some companies have suffered losses so severe that they may refuse to participate in this study.

The cooperation of the Port Authority of New York and New Jersey, and of the New York City Fire Department will also be sought.

The proposed study is based on a design originally developed by Professor Emeritus John Bryan of the University of Maryland and in use since Project People in the 1970s. The design has been enhanced and applied by the NFPA in several fire incident studies over the years, in particular the Beverly Hills Supper Club, MGM Grand Hotel and Westchase Hilton Hotel fire investigations. This method was used in the study of the 1993 World Trade Center evacuation.

The study will include a structured questionnaire mailed to approximately 2,000 building occupants and a subsequent detailed analysis of the responses. A response rate of 25%, which was achieved in the 1993 study, would result in the completion of 500 surveys. Given the extraordinary circumstances surrounding this evacuation, we could reasonably anticipate a response rate of over 40% and will propose a budget to accommodate such a strong response. Available investigative interviews of fire service personnel and building occupants will be utilized to design the questionnaire.

Included with the survey will be a request asking occupants to consider participating in a possible face-to-face interview-based study at a later time. This strategy was used in the human behavior study of the MGM Grand fire in 1983. Although approximately 90 percent of the respondents agreed to be interviewed, the funding for a follow-up study was never pursued, and the interviews were never conducted. Asking for permission to contact people later will leave the window open for such a study, although no such project task is outlined in this proposal.

To encourage cooperation of individuals involved in the fire, identities will be kept strictly confidential.

Data Analysis

A report will be produced and released by NFPA following data analysis, and results will be presented in technical journals and at conferences. The analysis report will summarize the information returned on the survey questions, and will include distributions of the respondent population by age, sex, occupation, location in the building, and disability, as well as whether they were alone or with others at the time of the incident, whether they had previous training or experience in fire emergencies and most especially,

whether they had been present in the World Trade Center towers at the time of the 1993 bombing. Summary statistics will also be presented for initial perception of the seriousness of the incident.

How people became aware of the emergency, and what actions they took initially will be described and correlations and analyses of variances will be calculated to determine any differences that may have existed between different categories of occupants and between occupants of the two towers. Evacuation routes taken, assistance given and provided and obstructions encountered will be described and comparisons will be made across occupant categories, between towers and with the observations from the 1993 evacuation study.

Other analyses eventually undertaken will be determined by the responses that are received on the surveys.

Work Plan Outline

Task 1 - Questionnaire Development and Data Collection

- a. Alter and adapt the questionnaire from the 1993 World Trade Center human behavior study.
- b. Formulate participant letter.
- c. Review of draft participation letter and questionnaire by an international team of human behavior specialists with experience in post-fire surveying.
- d. Design the strategy for choosing tenant companies to participate in the project.
- e. Arrange participation with the selected companies and prepare the mailing list.
- f. Print and mail questionnaires with self-addressed return envelopes. Preferably mail within two weeks of preparing mailing list.
- g. Identify investigative data of significance, collect available interviews.
- h. Process questionnaire data.

Task 2 - Analysis of Questionnaire and Other Available Data

- a. Analyze data using statistical software to obtain descriptive statistics, correlations and analyses of variance. The analysis will emphasize four essential groups of variables:
 - Population: age, sex, disabilities, occupation, alone or with others, previous training, experience in fire, particularly the 1993 bombing incident.
 - Threat perception: knowledge of the incident, reported hazardous conditions, occupant assessment of danger.
 - Building components: distance from source of fire and smoke, floor, location on floor, egress means, communication or alarm.
 - Behavioral aspects: means of awareness, first three to five actions taken, aids and hindrances to egress, movement through heat and smoke, distances moved, evacuation route, assistance to egress, injuries.

- b. Analyses of variance will be done to look at differences in perception of incident severity by gender, age, building, location within the tower, by experience in 1993, etc. Analyses will also look at evacuation time by floor of origin. Other analyses will be performed based on the responses received.
- c. Interpret the analysis results and explain findings.

Task 3 - Report Preparation

- a. Document the modes of escape and escape routes, hazardous conditions, etc.
- b. Create tables and charts to present the results.
- c. Formulate conclusions from the analysis of the population, building and behavioral variables, including integration of the engineering and investigation findings to the human behavior study.
- d. Provide a comparison of the analysis and conclusions with other recent human behavior dynamics studies, particularly the 1993 World Trade Center evacuation study.
- e. Identify limitations and recommendations.
- f. Prepare and edit final report, and submit to the funding organization(s).

The analysis and report on the evacuation of the towers will be completed in draft by the end of July, 2002, and the final report will be submitted at the end of December, 2002.

Study 2 -- Examination of Changes in Evacuation Behavior Between 1993 and 2001

This study will involve sorting through available first-person accounts, whether published, audio or televised, and match them with 1993 survey responses. Comparisons will include, but not be limited to, descriptions of conditions, delay times, travel times, total evacuation times, and reported obstructions and aids in escape encountered during evacuation.

This small study is expected to show the impact of the improvements in the evacuation system made after the 1993 bombing. Since Study 1 will be looking at survey responses in strata in the building, this study will help fill in information for the sections of the towers that will not be included in the chosen strata.

The results of this study will be presented at NFPA's May Congress in Minneapolis. A final report will be completed by October, 2002.

Study 3 -- The Evacuation of Building 7

Data Collection

Building 7 of the World Trade Center complex collapsed several hours after the attacks commenced, due to fires that burned uncontrolled throughout the structure after the collapse of the towers. The building, however, had been evacuated long before that collapse. This structure provides an important contrast to

the tower evacuations, in that the occupants faced a different type of emergency situation during a full building evacuation. The study of this building's evacuation will provide important insight into the problems encountered in a structure that was not designed for a simultaneous full-scale evacuation.

Depending on the emergency evacuation plan in place on September 11, the data collection for this building will involve either the participants of the fire emergency team (floor wardens, etc.) as was done in the study of the 1993 evacuation, or a stratified sample of the building occupants.

The cooperation of the Port Authority of New York and New Jersey, and of the New York City Fire Department will again be sought.

A slightly different survey instrument will be designed for this evacuation study. Although it will ask many of the same questions as the questionnaire to be used for the tower study, this questionnaire will be tailored to the particular circumstances of Building 7.

The study will include a structured questionnaire mailed to up to 2,000 building occupants and a subsequent detailed analysis of the responses. As described for Study 1, available investigative interviews of fire service personnel and building occupants will be utilized to design the questionnaire. Included with the survey will be a request asking occupants to consider participating in a possible face-to-face interview-based study at a later time.

To encourage cooperation of individuals involved in the fire, identities will be kept strictly confidential.

Data Analysis

A report will be produced and released by NFPA following data analysis, and results will be presented in technical journals and at conferences. The analysis report will summarize the information returned on the survey questions, and will include distributions of the respondent population by age, sex, occupation, location in the building, and disability, as well as whether they were alone or with others at the time of the incident, whether they had previous training or experience in fire emergencies and most especially, whether they had been present in the World Trade Center complex at the time of the 1993 bombing. Summary statistics will also be presented for initial perception of the seriousness of the incident.

How people became aware of the emergency, and what actions they took initially will be described and correlations and analyses of variances will be calculated to determine any differences that may have existed between different categories of occupants and between occupants of this building and occupants of the two towers. Evacuation routes taken, assistance given and provided and obstructions encountered will be described and comparisons will be made across occupant categories.

Other analyses eventually undertaken will be determined by the responses that are received on the surveys.

Work Plan Outline

The work plan outline detailed for Study 1 will be followed for the study of the Building 7 evacuation, with the analyses tailored to the Building 7 questionnaire and the responses received.

The analysis and report on the evacuation of Building 7 will be completed in draft by the end of December, 2002, and the final report will be submitted at the end of April, 2003.

Project Scheduling

Work on Studies 1 and 3 will begin immediately on receipt of award, so that data collection can begin as soon as possible. Study 2 will be done after the questionnaires have been mailed out and before in-processing of the returned surveys is underway. The analysis and report preparation for Study 1 (the evacuation of the towers) will be undertaken first, and the work on Study 3 will begin after the draft report for Study 1 is completed. The expected dates for final deliverables are: Study 1 - December 2002; Study 2 - October 2002; and Study 3 - April 2003.

Project Team

An NFPA project team will be organized and managed on a task force basis to accomplish this project along with a well-qualified human behavior expert from the National Research Council of Canada. A graduate student from Carleton University (Canada) will also participate.

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NOTE: pages 15-19 are being withheld under exemption (b) (4).